#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-010853

Address: 333 Burma Road **Date Inspected:** 23-Dec-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Li Yang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG Segment** 

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, M.Manikandan was present during the time noted above for observations relative to the work being performed.

# OBG # TRIAL ASSEMBLY YARD (Lift 5 West)

During a random skin flatness survey of the exterior surfaces of Lift 5 West located in the Trial Assembly area, the Caltrans Quality Assurance (QA) Inspector discovered the following issues:

5AW to 5BW

5AW SP (SP918A) to SP (SP409A) - CW Side

Surface flatness surveys were taken on the exterior Side Panel (SP) surface of longitudinal weld joint identified as SEG021A-001, counterweight side of 5AW between PP31 to PP32. The measurements were taken transverse to the direction of the side panel longitudinal weld joint. This area exceeded the maximum 5mm deviation from flat specified in State letter 05.03.01.004667.

- -Deviation from flat is 8mm in 630mm
- -The longitudinal weld splice is identified as: SEG021A-001.
- -The transverse weld splice is identified as: OBE5A-002 & OBE5A-001.
- -The SP plate numbers are: SP918A to SP409A.
- -The location is on the counterweight side of segment 5AW between PP31 to PP32.

5BW to 5CW

5BW SP (SP92A) to SP (SP410A) - CW Side

Surface flatness surveys were taken on the exterior Side Panel (SP) surface of longitudinal weld joint identified as

# WELDING INSPECTION REPORT

(Continued Page 2 of 3)

SEG023A-031, counterweight side of 5BW between PP34 to PP35. The measurements were taken transverse to the direction of the side panel longitudinal weld joint. This area exceeded the maximum 5mm deviation from flat specified in State letter 05.03.01.004667.

- -Deviation from flat is 7mm in 630mm.
- -The longitudinal weld splice is identified as: SEG023A-031.
- -The transverse weld splice for 5BW to 5CW is identified as: OBW5A-007 & OBW5A-006.
- -The SP plate numbers are: SP92A to SP410A.
- -The location is on the counterweight side of segment 5BW between PP34 to PP35.

#### 5CW SP (SP472A) to SP (SP418A) - CB Side

Surface flatness surveys were taken on the exterior Side Panel (SP) surface of longitudinal weld joint identified as SEG025A-010, cross beam side of 5CW between PP34 to PP35. The measurements were taken transverse to the direction of the side panel longitudinal weld joint. This area exceeded the maximum 5mm deviation from flat specified in State letter 05.03.01.004667.

- -Deviation from flat is 7mm in 630mm
- -The longitudinal weld splice is identified as: SEG025A-010.
- -The transverse weld splice for 5BE to 5CE is identified as: OBW5A-009 & OBW5A-010
- -The SP plate numbers are: SP472A to SP418A
- -The location is on the cross beam side of segment 5CW between PP34 to PP35.

This QA Inspector randomly observed the following work in progress:

OBG # TRIAL ASSEMBLY YARD (5CW)

#### **SMAW Process:**

Welding of weld joint -001 located on PCMK CA022, Corner assembly longitudinal weld joining edge and deck panel. Welder is identified as 048617. ZPMC CWI is identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-Tc-U4b-FCM-1.

OBG # TRIAL ASSEMBLY YARD (5BE-5CE)

# **SMAW Process:**

Welding of weld joint -024 located on PCMK SEG024B, Longitudinal flange to floor beam CJP weld. Welder is identified as 054467. ZPMC CWI is identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-2G (2F)-Repair.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

# **Summary of Conversations:**

The incident report is issued for the above mentioned discrepancy observed in Lift 5 West. And prior to issue it was informed to ZPMC QC and ABF QA.

# WELDING INSPECTION REPORT

(Continued Page 3 of 3)

# **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

Inspected By:	Manikandan, Murugan	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer